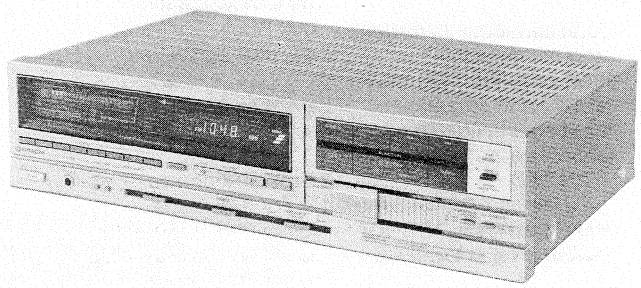
HITACHI
SERVICE MANUAL

TY | **No. 417 EGF**

HTA-35F



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CAUTION FOR U.S.A.

Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

SAFETY PRECAUTION

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safely related characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makers. Critical parts are marked with ⚠ in the circuit diagram and printed wiring board.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

SICHERHEITSMASSNAHMEN

Bei Wartungsarbeiten sind die folgenden Sicherheitsmaßnahmen zu beachten :

1. Da verschiedene Teile dieses Gerätes Sicherheitsfunktionen aufweisen, nur Original-Hitachi-Ersatzteile verwenden. Kritische Teile im Netzteil sollten nicht durch ähnliche Teile anderer Hersteller ersetzt werden. Alle kritischen Teile sind im Schaltplan und im Diagramm der Schaltplantinen mit dem Symbol ⚠ gekennzeichnet.
2. Vor der Auslieferung eines reparierten Gerätes an den Kunden muß der Wartungstechniker das Gerät einer gründlichen Prüfung unterziehen, um sicherzustellen, daß sicherer Betrieb ohne die Gefahr von elektrischen Schlägen gewährleistet ist.

PRÉCAUTIONS DE SÉCURITÉ

Les précautions suivantes doivent être observées chaque fois qu'une réparation doit être faite.

1. Etant donné que de nombreux composants de l'appareil possèdent des caractéristiques relatives à la sécurité, utiliser uniquement des pièces de rechange d'origine Hitachi pour effectuer un remplacement. Ceci se rapporte notamment aux piéces critiques du bloc d'alimentation qui ne doivent en aucun cas être remplacées par celles d'autres fabricants. Les piéces critiques sont accompagnés du symbole ⚠ dans le schéma de montage et sur le schéma de plaque de câblage.
2. Avant de retourner l'appareil réparé au client le technicien doit procéder à un essai complet pour s'assurer qu'il ne présente aucun danger de chocs électriques.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

STEREO TUNER AMPLIFIER

May 1984 TOYOKAWA WORKS

SPECIFICATIONS

• FM SECTION

Frequency range	U.S.A.:	87.9 – 107.9 MHz (100 kHz spacing)
	Europe:	87.50 – 108.00 MHz (50 kHz spacing)
Usable sensitivity	13.2 dBf (IHF)	
50 dB quieting sensitivity	Mono:	20.2 dBf (5.6 μV) (IHF)
	Stereo:	38.2 dBf (44.7 μV) (IHF)
Signal-to-noise ratio		
(at 65 dBf)	Mono:	74 dB (IHF)
		65 dB (DIN Audio Q-peak)
	Stereo:	70 dB (IHF)
		60 dB (DIN Audio Q-peak)
Total harmonic distortion		
(1 kHz, at 65 dBf)	Mono:	0.15%
	Stereo:	0.25%
Frequency response	30 Hz – 12 kHz ±2 dB (Except W. Germany)	
	30 Hz – 12 kHz $^{+1}_{-6}$ dB (for W. Germany)	
Selectivity	53 dB (±400 kHz, IHF)	
	45 dB (±300 kHz, DIN) (Except W. Germany)	
	65 dB (±300 kHz, DIN) (for W. Germany)	
Stereo separation	40 dB (Except W. Germany)	

• AM SECTION

Frequency range	U.S.A.:	530 – 1,620 kHz (10 kHz spacing)
	Europe:	522 – 1,611 kHz (9 kHz spacing)
Sensitivity	15 μV (IHF, ext. Antenna)	
Selectivity	40 dB (±10 kHz, IHF)	
	36 dB (±9 kHz, DIN)	
Signal-to-noise ratio	45 dB	

• AUDIO SECTION

RMS Power	
(Both channels driven)	35 Watts per channel, min. RMS, at 8 ohms from 20 Hz to 20 kHz, with no more than 0.05% total harmonic distortion
	35W + 35W (8 ohms, 1 kHz, T.H.D. 0.05%)
Power bandwidth	10 Hz – 30 kHz (1/2 RMS power, T.H.D. 0.05% at 8 ohms)
Total harmonic distortion	
(at rated output)	Less than 0.05%
Intermodulation distortion	
(at 1/2 rated output)	Less than 0.05%
Input sensitivity/impedance	
(at 35W output, 1 kHz)	
PHONO	2.5 mV/50 k-ohms
TAPE 1,2: CD/VIDEO/AUX	150 mV/27 k-ohms
Max. input level (PHONO)	140 mV (T.H.D. 0.05% at 1 kHz)
Output level at TAPE OUT	150 mV (PHONO at rated input)
	150 mV (FM 400 Hz, 30% mod. input 1 mV)
	150 mV (AM 400 Hz, 30% mod. input 5 mV/m)
Signal-to-noise ratio	
(IHF, A network, rated power)	
PHONO	72 dB
TAPE 1,2: CD/VIDEO/AUX	95 dB

• GENERAL

Power requirements	AC 120V 60 Hz, ~220V 50 Hz, ~240V 50 Hz or ~120V/220V/240V 50/60 Hz
Dimensions	435(W) × 110(H) × 290(D) mm
	17-1/8(W) × 3-1/4(H) × 14-1/8(D) in.
Weight	5 kg

Technische Daten

• FM-TEIL

Frequenzberich	USA:	87,9 – 107,9 MHz (Kanalabstand 100 kHz)
	Europe:	87,50 – 108,00 MHz (Kanalabstand 50 kHz)
Netzempfindlichkeit	13,2 dBf (IHF)	
Grenzempfindlichkeit		
(bei 50 dB)	Mono:	20,2 dBf (5,6 μV) (IHF)
	Stereo:	38,2 dBf (44,7 μV) (IHF)
Signal/Rausch-Abstand		
(bei 65 dBf)	Mono:	74 dB (IHF)
		65 dB (DIN Audio Q-peak)
	Stereo:	70 dB (IHF)
		60 dB (DIN Audio Q-peak)
Klirrgrad		
(1 kHz, bei 65 dBf)	Mono:	0,15%
	Stereo:	0,25%
Frequenzgang	30 Hz – 12 kHz ±2 dB (außer der Bundesrepublik Deutschland)	
	30 Hz – 12 kHz $^{+1}_{-6}$ dB (für die Bundesrepublik Deutschland)	
Selektivität	53 dB (±400 kHz, IHF)	
	45 dB (±300 kHz, DIN) (außer der Bundesrepublik Deutschland)	
	65 dB (±300 kHz, DIN) (für die Bundersrepublik Deutschland)	
Stereo-Trennung	40 dB (außer der Bundesrepublik Deutschland)	

• AM-TEIL

Frequenzberich	U.S.A.:	530 – 1.620 kHz (Kanalabstand 10 kHz)
	Europe:	522 – 1.611 kHz (Kanalabstand 9 kHz)
Empfindlichkeit	15 μV (IHF, Außenantenne)	
Selektivität	40 dB (±10 kHz, IHF)	
	36 dB (±9 kHz, DIN)	
Signal/Rausch-Abstand	45 dB	

• **AUDIO-TEIL**

Ausgangsleistung RMS (beide Kanäle)	35 Watts pro Kanal, min. RMS, bei 8 Ohms von 20 Hz bis 20 kHz, mit weniger als 0,05% Klirrgrad 35W + 35W (8 Ohms, 1 kHz, Klirrgrad 0,05%)
Leistungsbandbreite	10 Hz – 30 kHz (1/2 Ausgangsleistung RMS, Klirrgrad 0,05% bei 8 Ohms)
Klirrgrad (bei Nennausgang)	Weniger als 0,05%
Intermodulationsverzerrungen (bei 1/2 Nennleistung)	Weniger als 0,05%
Eingangsempfindlichkeit/Impedanz (bei 35W Ausgang, 1 kHz)	
PHONO	2,5 mV/50 k-Ohms
TAPE 1,2: CD/VIDEO/AUX	150 mV/27 k-Ohms
Max. Eingangspegel (PHONO)	140 mV (Klirrgrad 0,05% bei 1 kHz)
Ausgangspegel an TAPE OUT	150 mV (PHONO bei Nenneingang) 150 mV (FM 400 Hz, 30% mod., Eingang 1 mV) 150 mV (AM 400 Hz, 30% mod., Eingang 5 mV/m)
Signal/Rausch-Abstand (IHF, A Netz, Nennleistung)	
PHONO	72 dB
TAPE 1,2: CD/VIDEO/AUX	95 dB

• **GENERALE**

Spannungsversorgung	Wechselstrom 120V 60 Hz, ~220V 50 Hz, ~240V 50 Hz oder ~120V/220V/240V 50/60 Hz
Abmessungen	435(B) × 110(H) × 290(T) mm 17-1/8(B) × 3-1/4(H) × 14-1/8(T)
Gewicht	5 kg

CARACTERISTIQUES TECHNIQUES

• **SECTION FM**

Band de fréquences	U.S.A.: 87,9 – 107,9 MHz (intervalle 100 kHz) Europe: 87,50 – 108,00 MHz (intervalle 50 kHz)
Sensibilité utilisable	13,2 dBf (IHF)
Seuil de sensibilité 50 dB	Mono: 20,2 dBf (5,6 μV) (IHF) Stéréo: 38,2 dBf (44.7 μV) (IHF)
Rapport signal/bruit (á 65 dBf)	Mono: 74 dB (IHF) 65 dB (DIN crête-Q) Stéréo: 70 dB (IHF) 60 dB (DIN crête-Q)
Distorsion harmonique totale (à 65 dBf, 1 kHz)	Mono: 0,15% Stéréo: 0,25%
Réponse en fréquence	30 Hz – 12 kHz ±2 dB (sauf pour l'Allemagne de l'Ouest) 30 Hz – 12 kHz $^{+1}_{-6}$ dB (pour les l'Allemagne de l'Ouest)
Sélectivité	53 dB (±400 kHz, IHF) 45 dB (±300 kHz, DIN) (sauf pour l'Allemagne de l'Ouest) 65 dB (±300 kHz, DIN) (pour les l'Allemagne de l'Ouest)
Séparation stéréo	40 dB (sauf pour l'Allemagne de l'Ouest)

• **SECTION AM**

Gamme de fréquences	U.S.A.: 530 – 1.620 kHz (intervalle 10 kHz) Europe: 522 – 1.611 kHz (intervalle 9 kHz)
Sensibilité	15 μV (IHF, Antenne ext.)
Sélectivité	40 dB (±10 kHz, IHF) 36 dB (±9 kHz, DIN)
Rapport signal/bruit	45 dB

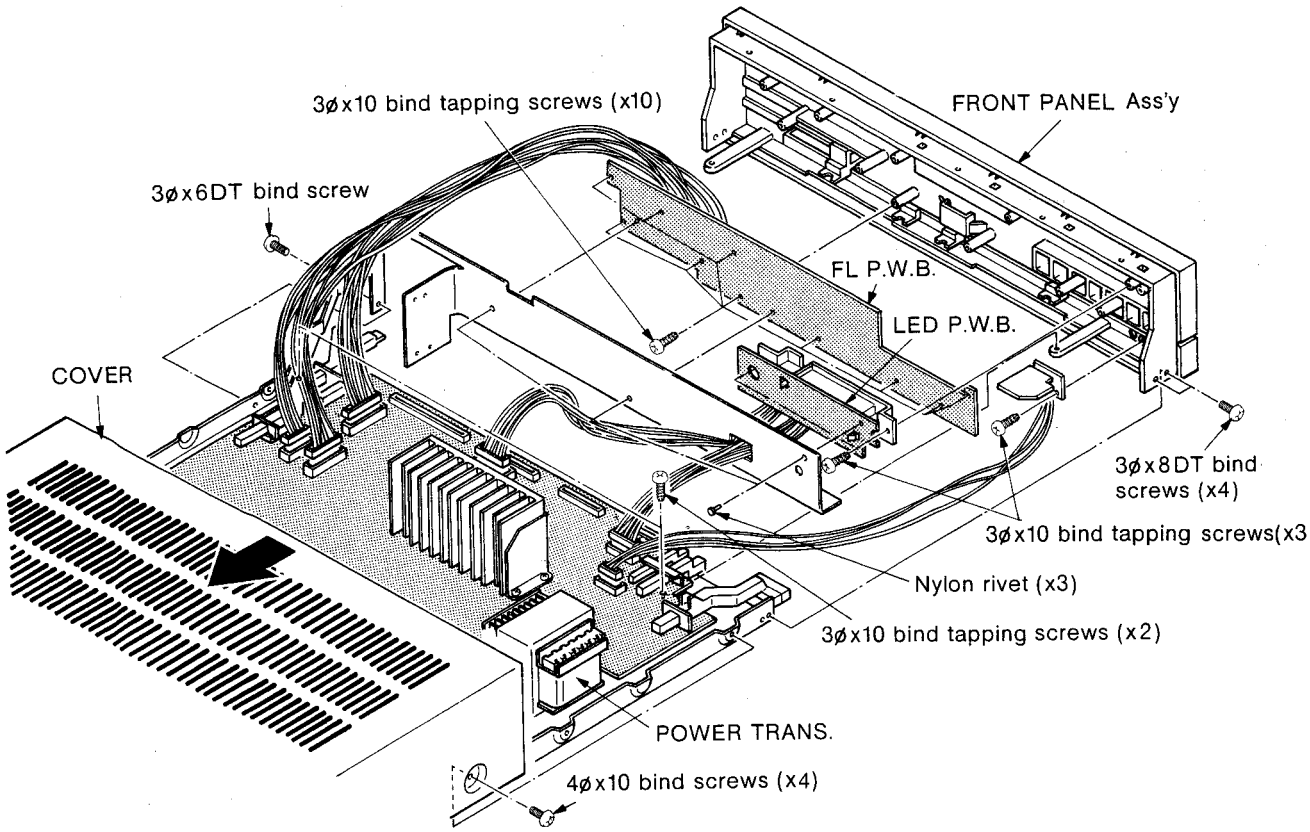
• **SECTION AUDIO**

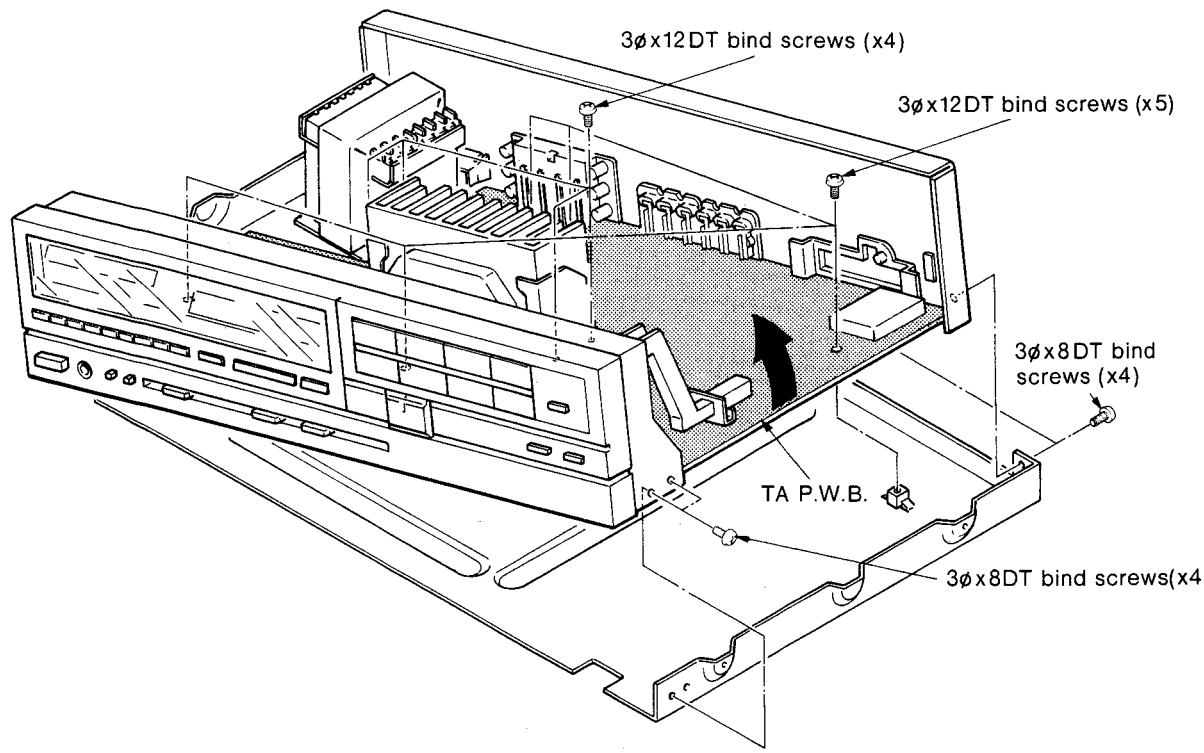
Puissance RMS (Tous les canals)	35 Watts par canal, min. RMS, à 8 ohms de 20 Hz à 20 kHz, avec une distorsion harmonique totale intérieure à 0,05% 35W + 35W (8 ohms 1 kHz, D.H.T. 0,05%)
Band passante	10kHz – 30 kHz (puissance 1/2 RMS, D.H.T. 0,05% à 8 ohms)
Une distorsion harmonique totale (à la sortie nominale)	Inférieure 0,05%
Distorsion d'intermodulation (à 1/2 de la sortie nominale)	Inférieure à 0,05%
Impédance/sensibilité d'entrée (avec sortie 35W, 1 kHz)	
PHONO	2,5 mV/50 k-ohms
TAPE 1,2: CD/VIDEO/AUX	150 mV/27 k-ohms
Niveau d'entrée max. (PHONO)	140 mV (D.H.T. 0,05% à 1 kHz)
Niveau de sortie à TAPE OUT	150 mV (PHONO à l'entrée nominale) 150 mV (FM 400 Hz, 30% mod. entrée 1 mV) 150 mV (AM 400 Hz, 30% mod. entrée 5 mV/m)
Rapport signal/bruit (IHF, réseau A, puissance nominale)	
PHONO	72 dB
TAPE 1,2: CD/VIDEO/AUX	95 dB

• **GÉNÉRAL**

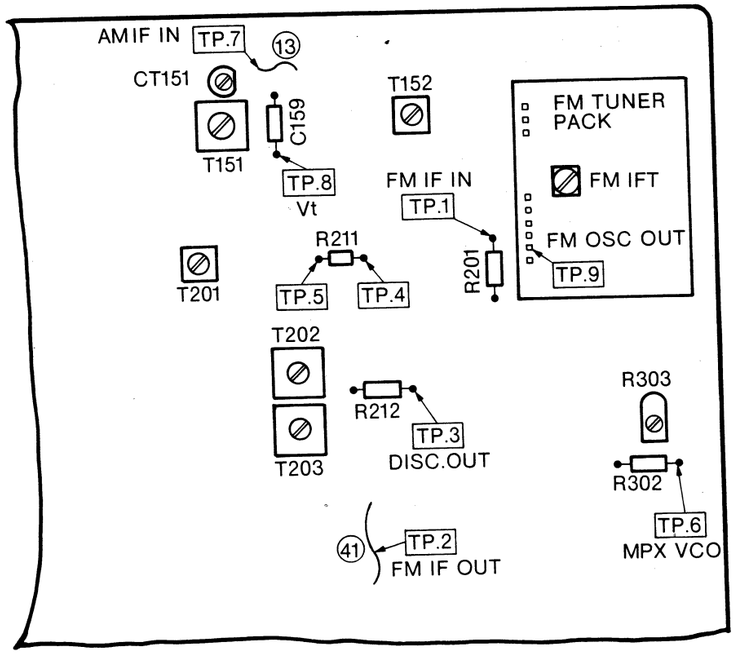
Alimentation	C.A. 120V 60 Hz, ~220V 50 Hz, ~240V 50 Hz ou ~120V/220V/240V 50/60 Hz
Dimensions	435(L) × 110(H) × 290(D) mm 17-1/8(L) × 3-1/4(H) × 14-1/8(D)
Poids	5 kg

DISASSEMBLY AND REPLACEMENT · ZERLEGUNG UND AUSTAUSCH · DEMONTAGE ET REMONTAGE





GENERAL ALIGNMENT INSTRUCTION · ALLGEMEINE AUSRICHTANLEITUNG · INSTRUCTIONS GENERALES



FM TUNER ALIGNMENT · ABGLEICH DES UKW-TUNERS · REGLAGE DE TUNER FM

FUNCTION : FM
Funktion : FM (UKW)
FUNCTION : FM

VOLUME : MIN
Lautstärke : Minimum
VOLUME : min.

FM MODE : MONO

Sweep Generator
Wobbelgenerator
Générateur de balayage

Signal Generator
Signalgenerator
Générateur de signaux

Oscilloscope
Oszilloskop
Oscilloscope

DC Null Meter
Gleichstrom-Nullmeter
Indicateur déquilibrage à C.C.

VTVM
Vakunmröhrenvoltmeter
Voltmètre electronique

Frequency Counter
Frequenzzähler
Fréquencemètre

Dist. Distortion Meter
Klirrmesser
Distorsionmètre

Sequence Folge Ordre		Connection Anschlüsse Connexion: Input Eingang Entrée	Connection: Output Ausgang Sortie	Setting Einstellung Montage: Tuning Abstimmanzeige indicateur d'accord	Setting: Signal	Adjust for Einstellung für Réglage pour: Adjust Einstellpunkt Réglage	Adjust for: Indication Indikation Indication
1	IF Amp. ZF-Verst. Amplificateur de fréquence intermédiaire	TP. 1 0.1μ 100k	IN Eingang Entrée TP. 2 100k 0.1μ	—	10.7 MHz	FM IFT (Tuner pack) (Tuner-Teil) (Ensemble Tuner)	(Note 2) (Hinweis 2)
2	"S" curve S-Kurve Courbe s	OUT Ausgang Sortie	IN Eingang Entrée TP. 3 100k 0.1μ	—	10.7 MHz	T202, T203 T202 : "S" curve S-Kurve Courbe en forme de "S" T203 : Straight Line Gerade Linie Ligne droite	Straight line Gerade Linie Ligne droite (Note 3) (Hinweis 3)
3	Discriminator Diskriminator Discriminateur	ANT. Terminal (300 ohms) Antennen-Anschluß (300 ohms) Borne d'antenne (300 ohms)	TP. 4 + TP. 5 −		98.1 MHz	98.1 MHz	T202	(Note 4) (Hinweis 4)
4	Distortion Verzerrung Distorsion	1 kHz, 60 dBμ 40 kHz (dev.)	REC OUT Dist.		98.1 MHz	98.1 MHz	T202, T203	Distortion min. (Note 5) (Hinweis 5)
5	Covering Bereich Portée		—					(Note 6) (Hinweis 6)
6	Tracking Nachführung Alignement		—					(Note 6) (Hinweis 6)
7	76 kHz (FM MODE : AUTO)	ANT. Terminal (300 ohms) Antennen-Anschluß (300 Ohms) Borne d'antenne (300 ohms) 60 dBμ Non modulated Nicht moduliert Sans modulation	TP. 6 100k		98.1 MHz	98.1 MHz	R303	76 kHz ±100 Hz

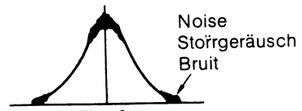


Fig. A
Abb. A

Note 1 : Perform adjustment at least 3 minutes after the power has been switched on.
Note 2 : Using a sweep generator, apply low-input signals (with a small amount of noise superimposed as in Fig. A), and adjust the FM IFT so that the waveforms are brought to their maximum in center marker frequency (10.7 MHz).
Note 3 : Adjust the T202 coil and obtain an S-curve. Now adjust the T203 coil and improve the linearity of the S-curve.
Note 4 : Connect a DC null meter and adjust T202 core for a reading of 0 V ± 30 mV.
Note 5 : When the distortion adjustment is performed, there will be a slight deviation in the discriminator adjustment performed under 3. Therefore, repeat adjustments 3 and 4 several times and adjust for a reading of 0 V on the DC null meter with the distortion at its minimum.
Note 6 : FM Tuner pack is aligned before shipping, so it is not necessary to adjust covering and tracking.

Hinweis 1 : Den Abgleich frühestens 3 Minuten nach dem Einschalten des Netzschalters durchführen.
Hinweis 2 : Mit Hilfe eines Wobbelgenerators sind niederpegelige Signale (mit geringer Rauschstörung an der Anstiegsflanke der in Abb. A) anzulegen; FM IFT so abgleichen, daß Wellenform an der Mittenmarkierungsfrequenz (10,7 MHz) ein Maximum annimmt.
Hinweis 3 : T202 abgleichen, um eine S-Kurve zu erhalten. Danach die Spule T203 nachjutieren, um die gerade Linie in der S-Kurve zu verbessern.
Hinweis 4 : Einen Gleichspannungsmesser anschließen und T202 auf eine Anzeige von 0 V ± 30 mV einstellen.
Hinweis 5 : Wenn der Verzerrungsabgleich vorgenommen wird, kommt es zu einer kleinen Anderund der in Punkt 3 durchgeführten Diskriminator-Einstellung. Die Abgleiche 3 und 4 sind daher mehrmals zu wiederholen, bis der Spannungsmesser bei minimalen Verzerrungen 0 V anzeigt.
Hinweis 6 : Das UKW-Empfangsteil wurde vor dem Versand eingestellt, so daß der Bereich und die Nachführung nicht einjustiert werden müssen.

Note 1 : Effectuer ce réglage au moins 3 minutes après la mise sous tension.
Note 2 : Utiliser un générateur de balayage et appliquer des signaux d'entrée à faible niveau (avec un faible chevauchement de bruit comme représenté sur la Fig. A), et ajuster FM IFT pour amener les formes d'ondes à leur maximum de la fréquence nominale de repérage (10,7 MHz)
Note 3 : Ajuster la bobine T202 pour obtenir une courbe en forme de "S". Ajuster ensuite la bobine T203 et améliorer la linéarité de la courbe en forme de "S".
Note 4 : Raccorder un indicateur de zéro à courant continu et ajuster le noyau T202 pour obtenir une lecture de 0 V ±30 mV..
Note 5 : Quand le réglage de distorsion est réalisé, il existera un léger écart de réglage du discriminateur, opèration qui est réalisée en en 3. Par conséquent, les réglages 3 et 4 doivent être faits à plusiers reprises de facon à obtenir une indication de 0 V à l'indicateur de zéro à continu quand la distorsion est minimale.
Note 6 : L'étage tuner FM est réglé avant son envoi, il est donc inutile d'effectuer le réglage de portée et d'alignement.

AM TUNER ALIGNMENT · ABGLEICH DES AM-TUNERS · REGLAGE DE TUNER AM

FUNCTION : AM
MODULATION : 400 Hz 30%

Funktion : AM (UKW)
Modulation : 400 Hz 30%

FUNCTION : AM
MODULATION : 400 Hz 30%

	Sequence Folge Ordre	Connection Anschlüsse Connexion: Input Eingang Entrée	Connection: Output Ausgang Sortie	Setting Einstellung Montage: Tuning Abstimmanzeige indicateur d'accord	Setting: Signal	Adjust for Einstellung für Réglage pour: Adjust Einstellpunkt Réglage	Indication Indikation Indication
1	IF Amp. ZF Verstärker Amplificateur de fréquence intermdiaire	Out Ausgang Sortie — TP. 7 — 0.1μ 100k	TP. 3 — 100k 0.1μ — IN Eingang Entrée	—	450 kHz	T201	MAX Caution 1 Vorsicht 1 Atteintion 1
2	Covering Abgleich Guipage	Loop antenna Rahmenantenne Antenne en carbon	TP. 8 (+) GND (−)	530 kHz or 522 kHz	—	(T152)	522 kHz: 1.2V DC 530 kHz: 1.3V DC Cautions 2 Vorsicht 2 Attention 2
3	Tracking Vorstufe Alignement		REC OUT	600 kHz or 603 kHz	600 kHz or 603 kHz	T151	Output max. Caution 3 Vorsicht 3 Attention 3
				1400 kHz or 1404 kHz	1400 kHz or 1404 kHz	CT151	

Fig. B
Abb. B

Fig. C
Abb. C

CAUTION

1. Adjust cores of T201 so that the waveform is as shown in Fig. B. After adjusting as above, increase the output level of the sweep generator and adjust T201 again so that the top of the waveform A (indicated in ig. C) will be flat and wide.
2. Carry out this adjustment for final adjustment of the coil only when you have moved the core by mistake.
3. Set the input level to 74 dB/m in coarse adjustment. Reduce the input level to minimum (50 dB/m) as adjustment proceeds.

VORSICHT

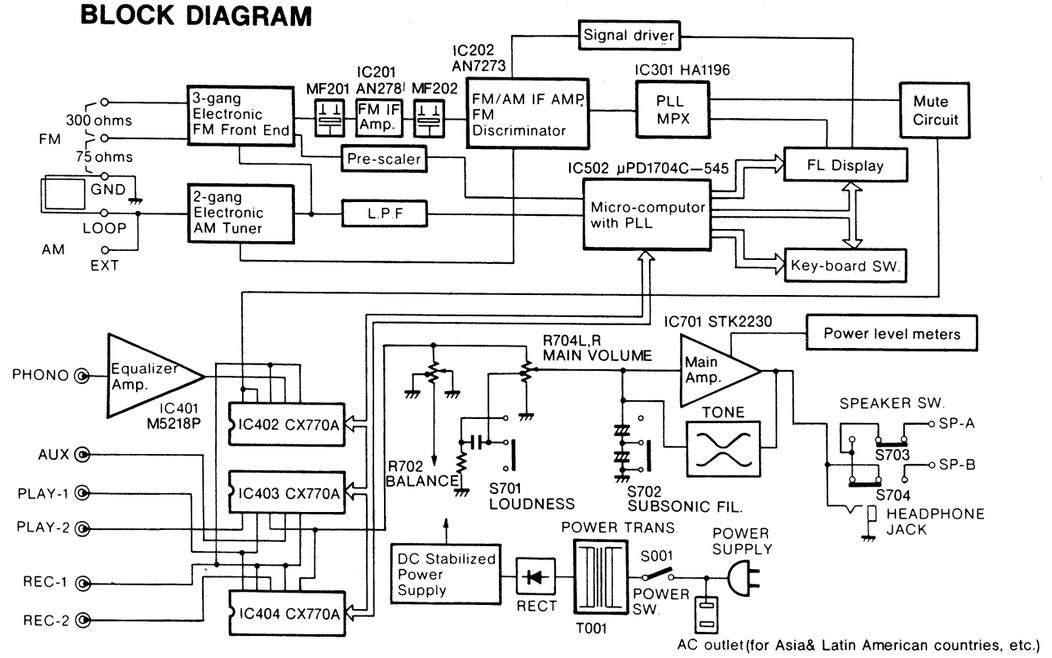
1. Die Kerne von T201 so einstellen, daß die Kurvenform der in Abb. B dargestellten entspricht.
   Nach der zuvor beschriebenen Einstellung den Ausgangspegel des Oszillators erhöhen und T201 abermals einstellen, so daß die Spitze der Kurvenform A (s. Abb. C) flach und breit wird.
2. Dises Einstellung zur abschließenden Angleichung der Spule nur vornehmen, wenn der Kern irrtümlich bewegt wurde.
3. Den Eingangspegel auf 74 dB/m grob einstellen. Auf minimal 50 dB/m nach Verlauf der Einstellung zurückstellen.

ATTENTION

1. Régler les âmes noires de T201 de façon à obtenir une forme d'onde comme indiquée sur le Fig. B. Après avoir réglé comme indiqué ci-dessus, augmenter le niveau d'entrée du générateur de balayage et régler T201 à nouveau de façon que le sommet de la forme d'onde A (voir Fig. C) soit aplati et large.
2. N'effectuer le dernier réglage de la bobine par ce réglage que si vous avez bougé l'âme par erreur.
3. Faire un réglage approximatif du niveau d'entrée à 74 dB/m. Réduire le niveau d'entrée jusqu'à un minimum de 50 dB/m à mesure quel'on effectue le réglage.

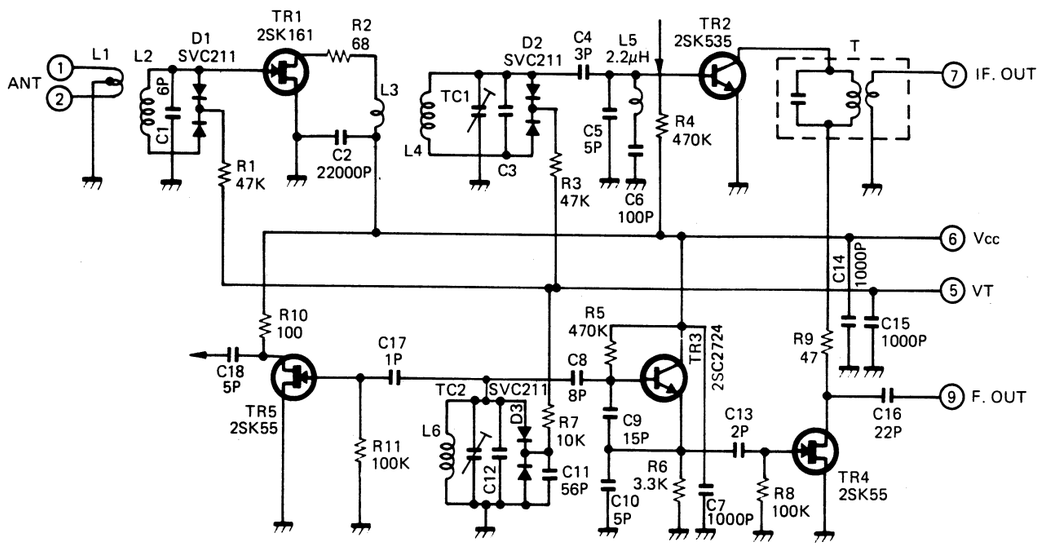
HITACHI HTA-35F

BLOCK DIAGRAM

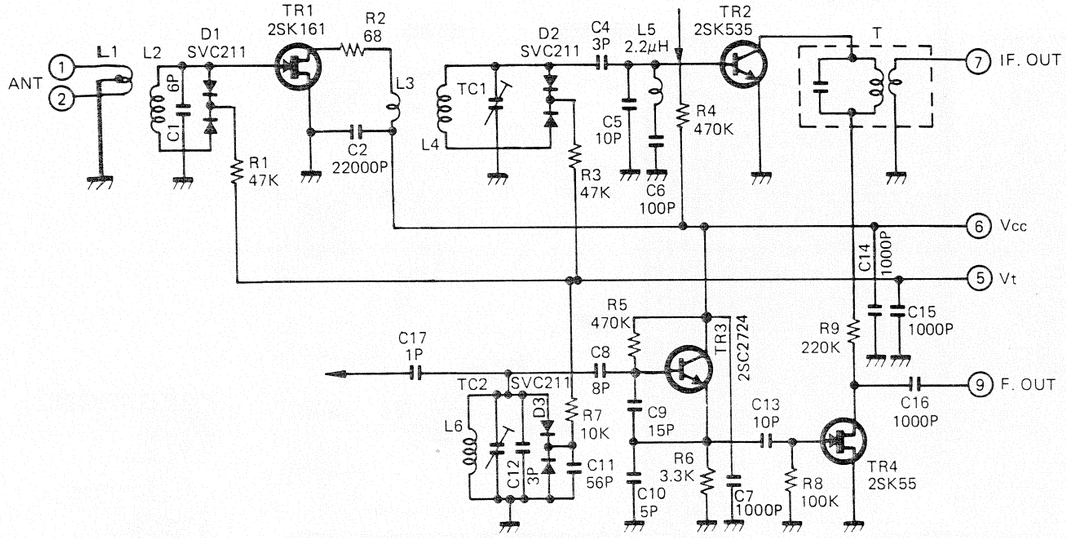


CIRCUIT DIAGRAM · SCHALTPLAN · PLAN DE CIRCUIT

Tuner pack



[For West Germany]

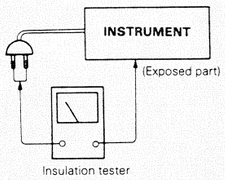


[For the others]

Check that exposed parts are acceptably insulated from the supply circuit before returning the instrument repaired to the customer.

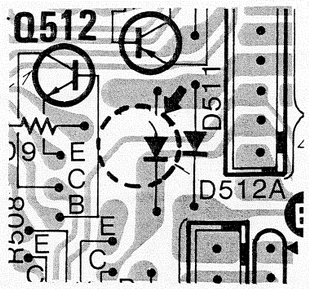
- **Checking method**

  Power switch is set to ON.
  Next, measure the resistance value between the both poles of attachment cup (Power supply plug) and the exposed parts (Parts such as Knob, Cover, etc. where the customer is easy to touch.) and check that the resistance value is 500 kohms or more.

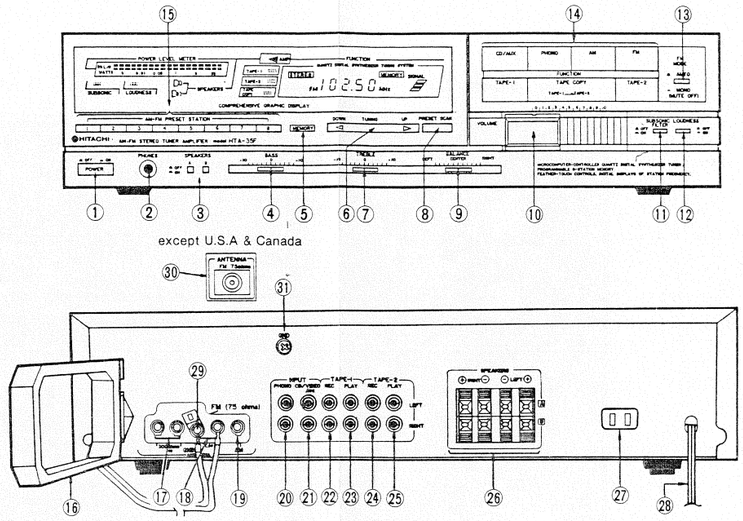


Notice for export models to the U.S.A. & Canada.
In order to switch the AM broadcast frequencies channel spacing from 10 kHz to 9 kHz, connect D512A as illustrated in the following figure.

Remarque concernant les modèles d'exportation pour les Etats-Unie et le Canada
Pour modifier l'espacement entre deux fréquences radio de la bande AM de 10 kHz à 9 kHz, relier D512A comme indiqué sur la figure.



FRONT AND REAR PANEL · VORDERE UND HINTERE BEDIENUNGSTAFEL · PANNEAUX AVANT ET ARRIERE



① POWER switch (POWER)
② HEADPHONES jack (PHONES)
③ SPEAKERS switches (SPEAKERS)
④ BASS control (BASS)
⑤ MEMORY write key (MEMORY)
⑥ TUNING key (UP/DOWN) (TUNING)
⑦ TREBLE control (TREBLE)
⑧ PRESET SCAN key (PRESET SCAN)
⑨ BALANCE control (BALANCE)
⑩ VOLUME control (VOLUME)
⑪ SUBSONIC FILTER switch (SUBSONIC FILTER)
⑫ LOUDNESS switch (LOUDNESS)
⑬ FM MODE switch (FM MODE)
⑭ FUNCTION keys
⑮ PRESET keys (AM-FM PRESET STATION)
⑯ AM LOOP ANTENNA
⑰ FM ANTENNA terminals (300 ohms) (FM ANTENNA)
⑱ AM LOOP Antenna terminals (AM LOOP ANTENNA)
⑲ AM ANTENNA terminal (AM ANTENNA)
⑳ PHONO INPUT jacks (PHONO INPUT)
㉑ CD/VIDEO/AUX INPUT jacks (CD/VIDEO/AUX INPUT)
㉒ TAPE-1 REC jacks (TAPE-1 REC)
㉓ TAPE-1 PLAY jacks (TAPE-1 PLAY)
㉔ TAPE-2 REC jacks (TAPE-2 REC)
㉕ TAPE-2 PLAY jacks (TAPE-2 PLAY)
㉖ SPEAKERS terminals (SPEAKERS)
㉗ AC outlet
㉘ Power supply cord
㉙ GROUND terminal (GND)
㉚ FM ANTENNA terminal (75 ohms) (except U.S.A. & Canada)
㉛ GROUND (GND)
㉜ VOLTAGE SELECTOR switch (for Asia & Latin American countries' sets)
㉝ Fuse holder (for Asia & Latin American countries' sets)

① Netzschalter (POWER)
② Kopfhörerbuchse (PHONES)
③ Lautsprecherschalter (SPEAKERS)
④ Bassregler (BASS)
⑤ Speichertaste (MEMORY)
⑥ Abstimmtaste (UP/DOWN) (TUNING)
⑦ Höhenregler (TREBLE)
⑧ Speicherasbuch-Taste (PRESET SCAN)
⑨ Balanceregler (BALANCE)
⑩ Lautstärkeregler (VOLUME)
⑪ Unterschalfilter-Schalter (SUBSONIC FILTER)
⑫ Laustärkekonturschalter (LOUDNESS)
⑬ UKW-Empfangsartschalter (FM MODE)
⑭ Funktionstasten
⑮ Stationstasten (AM-FM PRESET STATION)
⑯ MW-Rahmenantenne
⑰ UKW-Antenne-Anschlüsse (300 ohms) (FM ANTENNA)
⑱ MW-Rahmenantenne-Anschlüsse (AM LOOP ANTENNA)
⑲ MW-Antenne-Anschluß (AM ANTENNA)
⑳ Plattenspieler-Eingang (PHONO INPUT)
㉑ CD/Video/AUX-Eingang (CD/VIDEO/AUX INPUT)
㉒ Tonband-1-Aufnahme-Buchsen (TAPE-1 REC)
㉓ Tonband-1-Wiedergabe-Buchsen (TAPE-1 PLAY)
㉔ Tonband-2-Aufnahme-Buchsen (TAPE-2 REC)
㉕ Tonband-2-Wiedergabe-Buchsen (TAPE-2 PLAY)
㉖ Lautsprecher-Anschlüsse (SPEAKERS)
㉗ Kaltgerate-Steckdose
㉘ Netzkabel
㉙ Erdungsanschluß (GND)
㉚ UKW-Antenne-Anschluß (75 ohms) (außer U.S.A und Kanada)
㉛ Erdungsanschluß (GND)
㉜ Spannungswahlschalter (VOLTAGE SELECTOR) (für Gerät für Asien und Lateinamerika)
㉝ Sicherungshalter (FUSE) (für Geräte für Asien und Lateinamerika)

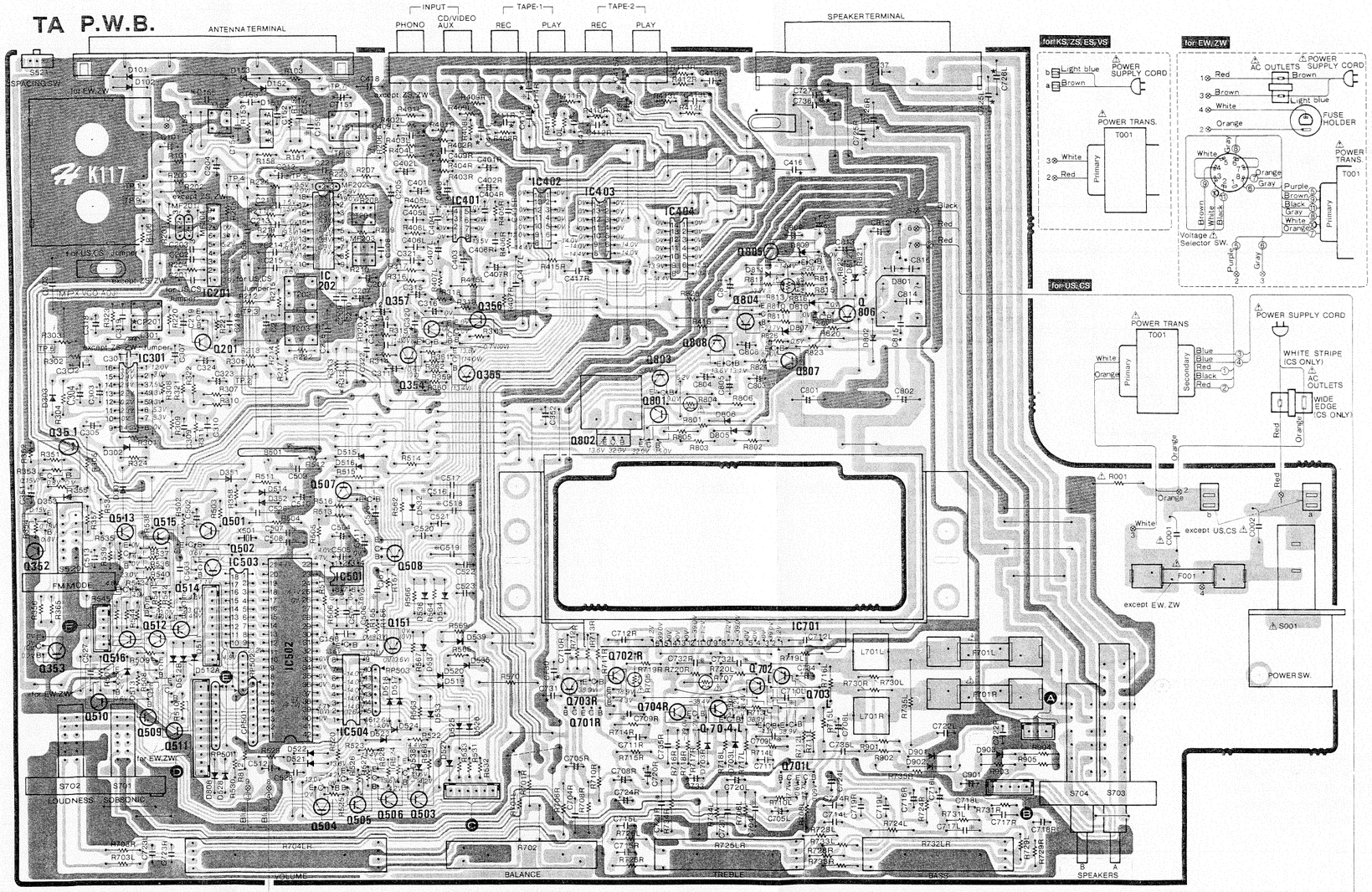
① Interrupteur d'alimentation (POWER)
② Prise du casque d'écoute (PHONES)
③ Interrupteur d'enceintes (SPEAKERS)
④ Commande de graved (BASS)
⑤ Touche d'enregistrement de mémoire (MEMORY)
⑥ Touche d'accord (UP/DOWN) (TUNING)
⑦ Commande des aigus (TREBLE)
⑧ Touche de préréglage de balayage (PRESET SCAN)
⑨ Commande de balance (BALANCE)
⑩ Commande de volume (VOLUME)
⑪ Interrupteur du filtre infra-acoustique (SUBSONIC FILTER)
⑫ Commande de correction physiologique (LOUDNESS)
⑬ Commutateur de mode FM (FM MODE)
⑭ Touches de fonction
⑮ Touches de préréglage (AM-FM PRESET STATION)
⑯ Antenne boucle AM
⑰ Bornes d'antenne FM (300 ohms) (FM ANTENNA)
⑱ Bornes d'antenne boucle AM (AM LOOP ANTENNA)
⑲ Borne d'antenne AM (Antenna/AM)
⑳ Prises d'entrée phono (PHONO INPUT)
㉑ Prises d'entrée CD/VIDEO/AUX (CD/VIDEO/AUX INPUT)
㉒ Prises d'enregistrement de bande 1 (TAPE-1 REC)
㉓ Prises de lecture de bande 1 (TAPE-1 PLAY)
㉔ Prises d'enregistrement de bande 2 (TAPE-2 REC)
㉕ Prises de lecture de bande 2 (TAPE-2 PLAY)
㉖ Bornes d'enceintes (SPEAKER)
㉗ Prise secteur
㉘ Cordon d'alimentation
㉙ Borne de mise à la terre (GND)
㉚ Bornes d'antenne FM (75 ohms) (sauf U.S.A et Canada)
㉛ Borne de mise à la terre (GND)
㉜ Sélecteur de tension (VOLTAGE SELECTOR) (pour l'Asie et l'Amérique Latine)
㉝ Support de fusible (FUSE) (pour l'Asie et l'Amérique Latine)

PRINTED WIRING BOARD · PRINTLATTEN · PLAN DE BASE

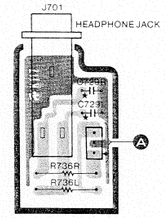
[: Earth, : Other]

※ : Axial lead cylindrical ceramic capacitor
※ : Zylindrischer Keramikkondensator mit axialer Zuleitung
※ : Condensateur céramique cylindrique à conducteur axial

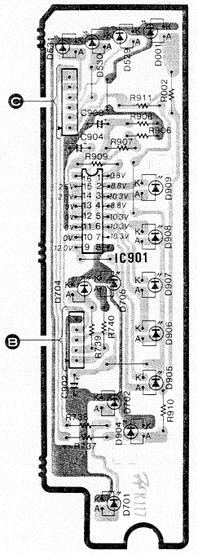
TA P.W.B.



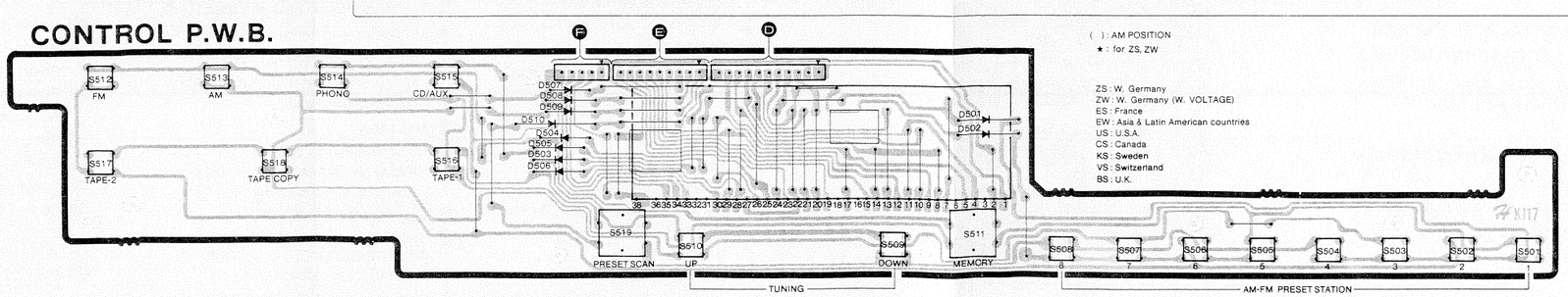
HEADPHONE JACK P.W.B.



LED P.W.B.



CONTROL P.W.B.

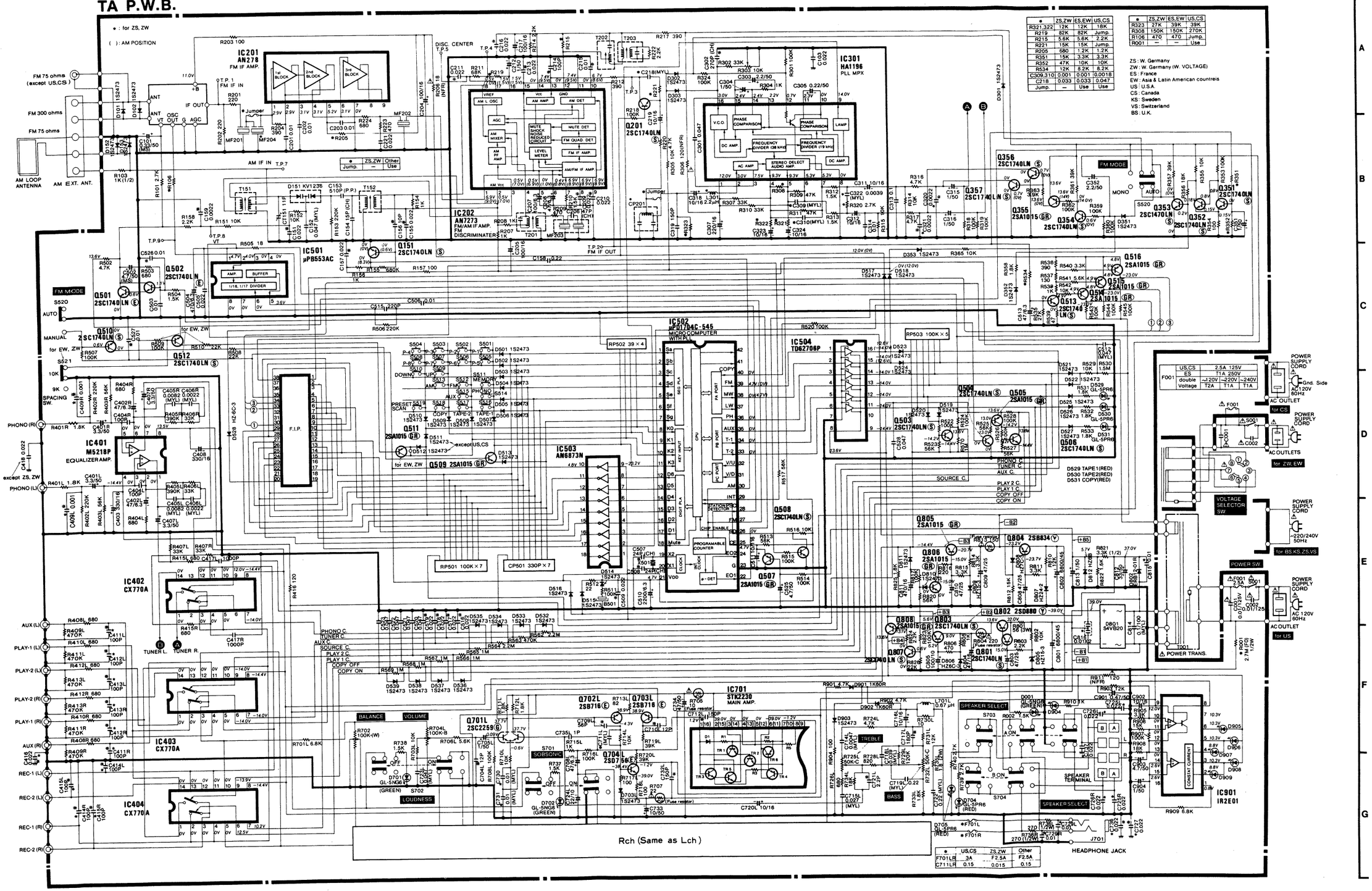


( ) : AM POSITION
★ : for ZS, ZW

ZS : W. Germany
ZW : W. Germany (W. VOLTAGE)
ES : France
EW : Asia & Latin American countries
US : U.S.A.
CS : Canada
KS : Sweden
VS : Switzerland
BS : U.K.

CIRCUIT DIAGRAM · SCHALTPLAN · PLAN DE CIRCUIT

TA P.W.B.



★	ZS,ZW	ES,EW	US,CS
R321,322	12K	12K	18K
R219	82K	82K	Jump.
R215	5.6K	5.6K	2.2K
R221	15K	15K	Jump.
R205	680	1.2K	1.2K
R351	15K	3.3K	3.3K
R352	47K	10K	10K
R534	12K	8.2K	8.2K
C309,310	0.001	0.001	0.0018
C218	0.033	0.033	0.047
Jump.	—	Use	Use

★	ZS,ZW	ES,EW	US,CS
R323	27K	39K	39K
R308	150K	150K	270K
R106	470	470	Jump.
R001	—	—	Use

ZS : W. Germany
ZW : W. Germany (W. VOLTAGE)
ES : France
EW : Asia & Latin American countreis
US : U.S.A.
CS : Canada
KS : Sweden
VS : Switzerland
BS : U.K.

F001	US,CS	2.5A 125V
	ES	T1A 250V
	double Voltage	~120V T2A / ~220V T1A / ~240V T1A

★	US,CS	ZS,ZW	Other
F701LR	3A	F2.5A	F2.5A
C711LR	0.15	0.015	0.15

REPLACEMENT PARTS LIST·ERSATZTEILLISTE·TABLEAU DES PIECES

CD..... Ceramic Discal
CC.... Cylindrycal Ceramic
EL.... Electrolytic
MF... Mylar Film
SP.... Super Capacitors
CF.... Carbon Film
ME... Metal
MO .. Metal, Oxide
CO ... Composition
FR.... Fuse Resistor

SYMBOL No.	PART No.	DESCRIPTION
CAPACITORS		
C001	0243901	CD 0.01μF +100 −0 % 400V
C002	0243901	CD 0.01μF +100 −0 % 400V
C101	0252874	EL 0.33μF 50V
C103	0240108	CC 0.022μF ±30% 16V
C151	0240108	CC 0.022μF ±30% 16V
C152	0275015	MF 0.047μF ±10% 50V
C153	0279326	MF 510pF ±2% 100V
C154	0230656	CC 15pF 50V
C155	0240108	CC 0.022μF ±30% 16V
C156	0230012	CC 10pF ±5% 50V
C157	0240108	CC 0.022μF ±30% 16V
C158	0244173	CD 0.022μF +80 −20 % 50V
C159	0240053	CC 2200pF ±20% 25V
C201	0240061	CC 0.01μF ±30% 16V
C202	0240061	CC 0.01μF ±30% 16V
C203	0240061	CC 0.01μF ±30% 16V
C204	0252531	EL 100μF 16V
C205	0252531	EL 100 VF 16V
C206	0246456	CD 47pF ±5% 50V
C207	0252231	EL 100 μV 6.3V
C208	0252225	EL 47μF 6.3V
C209	0240108	CC 0.022μF ±30% 16V
C210	0240108	CC 0.022μF ±30% 16V
C211	0240108	CC 0.022μF ±30% 16V
C212	0252811	EL 1μF 50V
C213	0240108	CC 0.022μF ±30% 16V
C214	0240033	CC 100pF ±5% 50V
C215	0240061	CC 0.01μF ±30% 16V
C216	0240108	CC 0.022μF ±30% 16V
C217	0252531	EL 100μF 16V
C218	0275014	MF 0.033μF ±10% (except USA & Canada) 50V
C218	0275015	MF 0.047μF ±10% (for USA & Canada) 50V
C219	0252521	EL 10μF 16V
C221	0240108	CC 0.022μF ±30% 16V
C301	0209175	CD 0.047μF +80 −20 % 50V
C302	0246470	EL 270μF 50V
C303	0252812	EL 2.2μF 50V
C304	0252811	EL 1μF 50V
C305	0252802	EL 0.22μF 50V
C307	0252532	EL 220μF 16V
C309	0274011	MF 1000pF ±10% (except USA & Canada) 50V
C309	0274032	MF 1800pF ±10% (for USA & Canada) 50V
C310	0274011	MF 1000pF ±10% (except USA & Canada) 50V
C310	0274032	MF 1800pF ±10% (for USA & Canada) 50V
C311	0252521	EL 10μF 16V
C312	0252521	EL 10μF 16V
C313	0240061	CC 0.01μF ±30% 16V
C314	0240061	CC 0.01μF ±30% 16V
C315	0252811	EL 1μF 50V
C316	0252811	EL 1μF 50V
C318	0252521	EL 10μF 16V
C319	0240035	CC 150pF 50V
C320	0240053	CC 2200pF ±20% (for W. Germany) 16V
C321	0240053	CC 2200pF ±20% (except W. Germany) 16V
C322	0274234	MF 3900pF ±5% (for W. Germany) 50V
C323	0252521	EL 10μF 16V
C324	0252521	EL 10μF 16V

SYMBOL No.	PART No.	DESCRIPTION
C351	0252811	EL 1μF 50V
C352	0252812	EL 2.2μF 50V
C401LR	0252813	EL 3.3μF 50V
C402LR	0252225	EL 47μF 6.3V
C403	0252533	EL 330μF 16V
C404LR	0240033	CC 100pF ±10% 50V
C405LR	0274036	MF 8200pF ±10% 50V
C406LR	0274013	MF 2200pF ±10% 50V
C407LR	0252813	EL 3.3μF 50V
C408	0252533	EL 330μF 16V
C409LR	0240045	CC 1000pF ±10% (for W. Germany) 50V
C411LR	0240033	CC 100pF ±10% (for W. Germany) 50V
C415LR	0240033	CC 100pF ±10% (for W. Germany) 50V
C416	0240108	CC 0.022μF ±30% (for W. Germany) 16V
C417LR	0240072	CC 1000pF ±10% (except W. Germany) 50V
C418	0244173	CD 0.022μF +80 −20 % (except W. Germany) 50V
C419	0244173	CD 0.022μF +80 −20 % 50V
C502	0252880	EL 4.7μF 50V
C503	0240061	CC 0.01μF ±30% 16V
C504	0252235	EL 470μF 6.3V
C505	0244173	CD 0.022μF +80 −20 % 50V
C506	0240061	CC 0.01μF ±30% 16V
C507	0230071	CC 24pF ±5% 50V
C508	0230071	CC 24pF ±5% 50V
C509	0240108	CC 0.022μF ±30% 16V
C510	0252242	EL 2200μF 6.3V
C511	0252521	EL 10μF 16V
C512	0275015	MF 0.047μF ±10% 50V
C513	0252225	EL 47μF 6.3V
C515	0240037	CC 220pF ±10% 50V
C516	0240108	CC 0.022μF ±30% 16V
C517	0240108	CC 0.022μF ±30% 16V
C518	0240108	CC 0.022μF ±30% 16V
C519	0240108	CC 0.022μF ±30% 16V
C520	0244185	CD 0.047μF +80 −20 % 50V
C521	0244185	CD 0.047μF +80 −20 % 50V
C522	0244185	CD 0.047μF +80 −20 % 50V
C523	0244185	CD 0.047μF +80 −20 % 50V
C525	0252815	EL 4.7μF 50V
C526	0240061	CC 0.01μF ±30% 16V
C527	0240061	CC 0.01μF ±30% 16V
C528	0244185	CD 0.047μF +80 −20 % 50V
C704LR	0230014	CC 12pF ±5% 50V
C705LR	0252811	EL 1μF 50V
C708LR	0252225	EL 47μF 6.3V
C709LR	0230030	CC 56pF ±5% 50V
C710LR	0230014	CC 12pF ±5% 50V
C711LR	0275012	MF 0.015μF ±10% (for W. Germany) 50V
C711LR	0276012	MF 0.15μF ±10% (except W. Germany) 50V
C712LR	0240035	CC 150pF ±10% 50V
C714LR	0274015	MF 4700pF ±10% 50V
C715LR	0275033	MF 0.027μF ±10% 50V
C716LR	0252521	EL 10μF 16V
C717LR	0240036	CC 180pF ±10% 50V
C718LR	0275034	MF 0.039μF ±10% 50V
C719LR	0276013	MF 0.22μF ±10% 50V
C720LR	0252521	EL 10μF 16V
C721LR	0230004	CC 2.2pF ±10% 50V
C722LR	0276013	MF 0.22μF ±10% 50V
C723LR	0275015	MF 0.047μF ±10% 50V
C724LR	0252322	EL 22μF 10V

SYMBOL No.	PART No.	DESCRIPTION
C725LR	0244173	CD 0.022μF +80 −20 % (for W. Germany) 50V
C726LR	0244173	CD 0.022μF +80 −20 % (for W. Germany) 50V
C727	0240108	CC 0.022μF ±30% (for W. Germany) 16V
C729LR	0244171	CD 0.01μF +80 −20 % (for W. Germany) 50V
C730	0275511	MF 0.01μF ±10% (for W. Germany) 50V
C731	0275011	MF 0.01μF ±10% (for W. Germany) 50V
C732LR	0240035	CC 150pF ±10% 50V
C733	0252821	EL 10μF 50V
C734	0252825	EL 47μF 50V
C735LR	0230000	CC 1pF ±20% 50V
736	0240108	CC 0.022μF ±30% (for W. Germany) 16V
C737	0244173	CD 0.022μF +80 −20 % 50V
C801	0259941	EL 6800μF 40V
C802	0259941	EL 6800μF 40V
C803	0252625	EL 47μF 25V
C804	0252525	EL 47μF 16V
C805	0252331	EL 100μF 10V
C808	0252625	EL 47μF 25V
C809	0252625	EL 47μF 25V
C810	0252625	EL 47μF 25V
C811	0252535	EL 470μF 16V
C812	0252823	EL 33μF 50V
C813	0252811	EL 1μF 50V
C814	0276511	MF 0.1μF ±10% 100V
C815	0244171	CD 0.01μF +80 −20 % (for West Germany) 50V
C816	0241901	CD 0.01μF +80 −20 % (for W. Germany) 250V
C901	0252805	EL 0.47μF 50V
C902	0252521	EL 10μF 16V
C903	0252815	EL 4.7μF 50V
C904	0252811	EL 1μF 50V
RESISTORS		
R001	0139005	CO 2.7MΩ ±10% RC1/2GF (for USA & Canada)
R002	0129605	CF 1.5KΩ ±5% SRD1/4P
R101	0129611	CF 2.7KΩ ±5% SRD1/4P
R103	0134373	CO 1KΩ ±10% RC1/2GF
R106	0113607	CF 470Ω ±5% SRD4/25P (except USA & Canada)
R151	0113639	CF 10KΩ ±5% SRD4/25P
R152	0129631	CF 10kΩ ±5% SRD1/4P
R153	0113671	CF 220KΩ ±5% SRD4/25P
R154	0129601	CF 1KΩ ±5% SRD1/4P
R155	0113683	CF 680KΩ ±5% SRD4/25P
R156	0113615	CF 1KΩ ±5% SRD4/25P
R157	0113591	CF 100Ω ±5% SRD4/25P
R158	0113623	CF 2.2KΩ ±5% SRD4/25P
R201	0129569	CF 220Ω ±5% SRD1/4P
R202	0129569	CF 220Ω ±5% SRD1/4P (except W. Germany)
R203	0113591	CF 100Ω ±5% SRD4/25P
R204	0113605	CF 390Ω ±5% SRD4/25P
R205	0129581	CF 680Ω ±5% SRD1/4P (except W. Germany)
R205	0129603	CF 1.2KΩ ±5% SRD1/4P (for W. Germany)
R206	0123612	CF 18Ω ±5% SRD1/4P
R207	0113615	CF 1KΩ ±5% SRD4/25P
R208	0113615	CF 1KΩ ±5% SRD4/25P
R209	0113607	CF 470Ω ±5% SRD4/25P
R210	0113619	CF 1.5KΩ ±5% SRD4/25P
R211	0113659	CF 68KΩ ±5% SRD4/25P
R212	0113605	CF 390Ω ±5% SRD4/25P

CD..... Ceramic Discal
CC.... Cylindrycal Ceramic
EL.... Electrolytic
MF... Mylar Film
SP.... Super Capacitors
CF.... Carbon Film
ME... Metal
MO .. Metal, Oxide
CO ... Composition
FR.... Fuse Resistor

SYMBOL No.	PART No.	DESCRIPTION
R214	0113623	CF 2.2KΩ ±5% SRD4/25P
R215	0113623	CF 2.2KΩ ±5% SRD4/25P (for USA & Canada)
R215	0113633	CF 5.6KΩ ±5% SRD4/25P (except USA & Canada)
R217	0113605	CF 390Ω ±5% SRD4/25P
R218	0113663	CF 100KΩ ±5% SRD4/25P
R219	0113661	CF 82KΩ ±5% SRD4/25P (except USA & Canada)
R220	0113631	CF 4.7KΩ ±5% SRD4/25P
R221	0113643	CF 15KΩ ±5% SRD4/25P (except USA & Canada)
R222	0113623	CF 2.2KΩ ±5% SRD4/25P
R223	0113607	CF 470Ω ±5% SRD4/25P
R224	0113611	CF 680Ω ±5% SRD4/25P
R301	0113663	CF 100KΩ ±5% SRD4/25P
R302	0113651	CF 33KΩ ±5% SRD4/25P
R304	0129601	CF 1KΩ ±5% SRD1/4P
R305	0129631	CF 10KΩ ±5% SRD1/4P
R306	0123622	CF 120Ω ±5% SRD1/4P
R307	0113651	CF 33KΩ ±5% SRD4/25P
R308	0113673	CF 150KΩ ±5% SRD4/25P (except USA & Canada)
R308	0113673	CF 270KΩ ±5% SRD4/25P (for USA & Canada)
R309	0113655	CF 47KΩ ±5% SRD4/25P
R310	0113651	CF 33KΩ ±5% SRD4/25P
R311	0113655	CF 47KΩ ±5% SRD4/25P
R312	0129605	CF 1.5KΩ ±5% SRD1/4P
R313	0129605	CF 1.5KΩ ±5% SRD1/4P
R314	0113639	CF 10KΩ ±5% SRD4/25P
R315	0113639	CF 10KΩ ±5% SRD4/25P
R316	0113631	CF 4.7KΩ ±5% SRD4/25P
R317	0113631	CF 4.7KΩ ±5% SRD4/25P
R318	0113663	CF 100KΩ ±5% SRD4/25P
R319	0113663	CF 100KΩ ±5% SRD4/25P
R320	0113625	CF 2.7KΩ ±5% SRD4/25P (for W. Germany)
R321	0113641	CF 12KΩ ±5% SRD4/25P (except USA & Canada)
R321	0113645	CF 18KΩ ±5% SRD4/25P (for USA & Canada)
R322	0113641	CF 12KΩ ±5% SRD4/25P (except USA & Canada)
R322	0113645	CF 18KΩ ±5% SRD4/25P (for USA & Canada)
R323	0113649	CF 27KΩ ±5% SRD4/25P (for W. Germany)
R323	0113653	CF 39KΩ ±5% SRD4/25P (except W. Germany)
R324	0113663	CF 100KΩ ±5% SRD4/25P
R351	0113627	CF 3.3KΩ ±5% SRD4/25P (except W. Germany)
R351	0113643	CF 15KΩ ±5% SRD4/25P (for W. Germany)
R352	0113639	CF 10KΩ ±5% SRD4/25P (except W. Germany)
R352	0113655	CF 47KΩ ±5% SRD4/25P (for W. Germany)
R353	0113663	CF 100KΩ ±5% SRD4/25P
R354	0113591	CF 100Ω ±5% SRD4/25P
R355	0113639	CF 10KΩ ±5% SRD4/25P
R356	0113645	CF 18KΩ ±5% SRD4/25P
R357	0113653	CF 39KΩ ±5% SRD4/25P
R358	0113621	CF 1.8KΩ ±5% SRD4/25P
R359	0113663	CF 100KΩ ±5% SRD4/25P
R360	0113663	CF 100KΩ ±5% SRD4/25P
R361	0113653	CF 39KΩ ±5% SRD4/25P
R362	0113663	CF 100KΩ ±5% SRD4/25P
R363	0113629	CF 3.9KΩ ±5% SRD4/25P
R365	0113639	CF 10KΩ ±5% SRD4/25P
R401LR	0113621	CF 1.8KΩ ±5% SRD4/25P
R402LR	0113671	CF 220KΩ ±5% SRD4/25P
R403LR	0113657	CF 56KΩ ±5% SRD4/25P
R404LR	0113611	CF 680Ω ±5% SRD4/25P
R405LR	0113677	CF 390KΩ ±5% SRD4/25P
R406LR	0113651	CF 33KΩ ±5% SRD4/25P

SYMBOL No.	PART No.	DESCRIPTION
R407LR	0113651	CF 33KΩ ±5% SRD4/25P
R408LR	0113611	CF 680Ω ±5% SRD4/25P
R409LR	0113679	CF 470KΩ ±5% SRD4/25P
R410LR	0113611	CF 680Ω ±5% SRD4/25P
R411LR	0113679	CF 470KΩ ±5% SRD4/25P
R412LR	0113611	CF 680Ω ±5% SRD4/25P
R413LR	0113679	CF 470KΩ ±5% SRD4/25P
R415LR	0113611	CF 680Ω ±5% SRD4/25P
R416	0123622	CF 120Ω ±5% SRD1/4P
R502	0113631	CF 4.7KΩ ±5% SRD4/25P
R503	0113611	CF 680Ω ±5% SRD4/25P
R504	0129605	CF 1.5KΩ ±5% SRD1/4P
R505	0113573	CF 18Ω ±5% SRD4/25P
R506	0113671	CF 220KΩ ±5% SRD4/25P
R507	0113663	CF 100KΩ ±5% SRD4/25P
R508	0113647	CF 22KΩ ±5% SRD4/25P
R509	0113663	CF 100KΩ ±5% SRD4/25P (for W. Germany, Asia & Latin American countries, etc)
R510	0113647	CF 22KΩ ±5% SRD4/25P (for W. Germany, Asia & Latin American countries, etc)
R511	0113663	CF 100KΩ ±5% SRD4/25P
R512	0113575	CF 22Ω ±5% SRD4/25P
R513	0113657	CF 56KΩ ±5% SRD4/25P
R514	0113663	CF 100KΩ ±5% SRD4/25P
R515	0113663	CF 100KΩ ±5% SRD4/25P
R516	0113639	CF 10KΩ ±5% SRD4/25P
R517	0113657	CF 56KΩ ±5% SRD4/25P
R520	0113663	CF 100KΩ ±5% SRD4/25P
R522	0113663	CF 100KΩ ±5% SRD4/25P
R523	0113657	CF 56KΩ ±5% SRD4/25P
R524	0113663	CF 100KΩ ±5% SRD4/25P
R525	0113657	CF 56KΩ ±5% SRD4/25P
R526	0113663	CF 100KΩ ±5% SRD4/25P
R527	0113657	CF 56KΩ ±5% SRD4/25P
R528	0113663	CF 100KΩ ±5% SRD4/25P
R529	0113639	CF 10KΩ ±5% SRD4/25P
R530	0113691	CF 1.5MΩ ±5% SRD4/25P
R531	0113621	CF 1.8KΩ ±5% SRD4/25P
R532	0113621	CF 1.8KΩ ±5% SRD4/25P
R533	0113621	CF 1.8KΩ ±5% SRD4/25P
R534	0129623	CF 8.2KΩ ±5% SRD1/4P (except W. Germany)
R534	0129633	CF 12KΩ ±5% SRD1/4P (for W. Germany)
R535	0113649	CF 27KΩ ±5% SRD4/25P
R536	0113605	CF 390Ω ±5% SRD4/25P
R537	0113695	CF 150Ω ±5% SRD4/25P
R538	0113615	CF 1KΩ ±5% SRD4/25P
R539	0113583	CF 47Ω ±5% SRD4/25P
R540	0113627	CF 3.3KΩ ±5% SRD4/25P
R541	0113633	CF 5.6KΩ ±5% SRD4/25P
R542	0113639	CF 10KΩ ±5% SRD4/25P
R543	0113663	CF 100KΩ ±5% SRD4/25P
R544	0113663	CF 100KΩ ±5% SRD4/25P
R545	0113663	CF 100KΩ ±5% SRD4/25P
R562	0129709	CF 2.2MΩ ±5% SRD1/4P
R563	0113679	CF 470KΩ ±5% SRD4/25P
R564	0129709	CF 2.2MΩ ±5% SRD1/4P
R565	0113687	CF 1MΩ ±5% SRD4/25P
R566	0113687	CF 1MΩ ±5% SRD4/25P
R567	0113687	CF 1MΩ ±5% SRD4/25P
R568	0113687	CF 1MΩ ±5% SRD4/25P
R569	0113687	CF 1MΩ ±5% SRD4/25P
R570	0113687	CF 1MΩ ±5% SRD4/25P
R701LR	0129621	CF 6.8KΩ ±5% SRD1/4P
R703LR	0129631	CF 10KΩ ±5% SRD1/4P
⚠ R705	0110601	FR 10Ω ±5% SRD1/4P
R706LR	0113633	CF 5.6KΩ ±5% SRD4/25P
⚠ R707	0110605	FR 22Ω ±5% SRD1/4P
R708LR	0113663	CF 100KΩ ±5% SRD4/25P
R710LR	0129631	CF 10KΩ ±5% SRD1/4P
R711LR	0129607	CF 1.8KΩ ±5% SRD1/4P
R712LR	0129607	CF 1.8KΩ ±5% SRD1/4P
R713LR	0129553	CF 82Ω ±5% SRD1/4P
R714LR	0129631	CF 10KΩ ±5% SRD1/4P

SYMBOL No.	PART No.	DESCRIPTION
R715LR	0129601	CF 1KΩ ±5% SRD1/4P
R716LR	0113663	CF 100KΩ ±5% SRD4/25P
R717LR	0113591	CF 100Ω ±5% SRD4/25P
R718LR	0113591	CF 100Ω ±5% SRD4/25P
R719LR	0113653	CF 39KΩ ±5% SRD4/25P
R720LR	0113653	CF 39KΩ ±5% SRD4/25P
R724LR	0129617	CF 4.7KΩ ±5% SRD1/4P
R726LR	0113611	CF 680Ω ±5% SRD4/25P
R728LR	0129583	CF 820Ω ±5% SRD1/4P
R729LR	0113665	CF 120KΩ ±5% SRD4/25P
R730LR	0129531	CF 10Ω ±5% SRD1/4P
R731LR	0113641	CF 12KΩ ±5% SRD4/25P
R733LR	0129607	CF 1.8KΩ ±5% SRD1/4P
R734LR	0113645	CF 18KΩ ±5% SRD4/25P
R735LR	0119134	ME 1.8Ω ±10% RN2B
R736LR	0134366	CO 270Ω ±10% RC1/2GF
R737	0129605	CF 1.5KΩ ±5% SRD1/4P
R738	0129605	CF 1.5KΩ ±5% SRD1/4P
R739	0129611	CF 2.7KΩ ±5% SRD1/4P
R740	0129611	CF 2.7KΩ ±5% SRD1/4P
R801	0119610	MO 56Ω ±10% RS315B
R802	0129631	CF 10KΩ ±5% SRD1/4P
R803	0113623	CF 2.2KΩ ±5% SRD4/25P
⚠ R804	0110625	FR 220Ω ±5% RN1/4B
R805	0129601	CF 1KΩ ±5% SRD1/4P
R806	0113607	CF 470Ω ±5% SRD4/25P
R810	0113641	CF 12KΩ ±5% SRD4/25P
R811	0113627	CF 3.3KΩ ±5% SRD4/25P
R812	0113643	CF 15KΩ ±5% SRD4/25P
⚠ R813	0110623	FR 150Ω ±5% RN1/4P
R814	0113627	CF 3.3KΩ ±5% SRD4/25P
R815	0113627	CF 3.3KΩ ±5% SRD4/25P
R816	0129569	CF 220Ω ±5% SRD1/4P
R817	0113663	CF 100KΩ ±5% SRD4/25P
R820	0113657	CF 56KΩ ±5% SRD4/25P
R821	0134379	CO 3.3KΩ ±10% RC1/2GF
R822	0129605	CF 1.5KΩ ±5% SRD1/4P
R823	0113663	CF 100KΩ ±5% SRD4/25P
R824	0113623	CF 2.2KΩ ±5% SRD4/25P
R825	0129607	CF 1.8KΩ ±5% SRD1/4P
R826	0113647	CF 22KΩ ±5% SRD4/25P
R901	0129617	CF 4.7KΩ ±5% SRD1/4P
R902	0129617	CF 4.7KΩ ±5% SRD1/4P
R903	0113641	CF 12KΩ ±5% SRD4/25P
R904	0113591	CF 100Ω ±5% SRD4/25P
R905	0113629	CF 3.9KΩ ±5% SRD4/25P
R906	0113643	CF 15KΩ ±5% SRD4/25P
R907	0113663	CF 100KΩ ±5% SRD4/25P
R908	0113645	CF 18KΩ ±5% SRD4/25P
R909	0129621	CF 6.8KΩ ±5% SRD1/4P
R910	0129601	CF 1KΩ ±5% SRD1/4P
R911	0123622	CF 120Ω ±5% SRD1/4P
ICS & TRANSISTORS		
IC201	2368431	AN278
IC202	2387321	AN7273
IC301	2367271	HA1196
IC401	2387301	M5218P
IC402	2368831	CX770A
IC403	2368831	CX770A
IC404	2368831	CX770A
IC501	2368741	μPB553AC
IC502	2369723	μPD1704C-545
IC503	2387421	AN6873N
IC504	2387511	TD62706P
IC701	2369771	STK2230
IC901	2368631	IR2E01
Q151	2328652	2SC1740LN Ⓢ
Q201	2328652	2SC1740LN Ⓢ
Q351	2328652	2SC1740LN Ⓢ
Q352	2328652	2SC1740LN Ⓢ
Q353	2328652	2SC1740LN Ⓢ
Q354	2328652	2SC1740LN Ⓢ
Q355	2329183	2SA1015 (GR)
Q356	2328652	2SC1740LN Ⓢ
Q357	2328652	2SC1740LN Ⓢ
Q501	2328653	2SC1740LN Ⓔ

SYMBOL No.	PART No.	DESCRIPTION
Q502	2328653	2SC1740LN Ⓔ
Q503	2328652	2SC1740LN Ⓢ
Q504	2328652	2SC1740LN Ⓢ
Q505	2329183	2SA1015 (GR)
Q506	2328652	2SC1740LN Ⓢ
Q507	2329183	2SA1015 (GR)
Q508	2328652	2SC1740LN Ⓢ
Q509	2329183	2SA1015 (GR)
Q510	2328652	2SC1740LN Ⓢ
Q511	2329183	2SA1015 (GR) (for W. Germany, Asia & Latin America countries, etc.)
Q512	2328652	2SC1740LN Ⓢ (for W. Germany, Asia & Latin America countries, etc.)
Q513	2328652	2SC1740LN Ⓢ
Q514	2329183	2SA1015 (GR)
Q515	2329183	2SA1015 (GR)
Q516	2329183	2SA1015 (GR)
Q701LR	2367656	2SC2259 Ⓖ
Q702LR	2328862	2SB716 Ⓔ
Q703LR	2328862	2SB716 Ⓔ
Q704LR	2328872	2SD756 Ⓖ
Q801	2328652	2SC1740LN Ⓢ
Q802	2317822	2SD880 Ⓨ
Q803	2328652	2SC1740LN Ⓢ
Q804	2317832	2SB834 Ⓨ
Q805	2329183	2SA1015 (GR)
Q806	2329183	2SA1015 (GR)
Q807	2328652	2SC1740LN Ⓢ
Q808	2329183	2SA1015 (GR)
DIODES		
D001	2337811	GL-5NG6 (GREEN)
D101	2337601	1S2473
D102	2337601	1S2473
D151	2339921	KV1236
D152	2337601	1S2473
D153	2337601	1S2473
D301	2337601	1S2473
D302	2337601	1S2473
D303	2337601	1S2473
D351	2337601	1S2473
D352	2337601	1S2473
D353	2337601	1S2473
D501	2337601	1S2473
⌇	⌇	⌇
D510	2337601	1S2473
D511	2337601	1S2473(except USA & Canada)
D512	2337601	1S2473
⌇	⌇	⌇
D527	2337601	1S2473
D528	2337519	HZ-6C3
D529	2337751	GL-5PR6 (RED)
D530	2337751	GL-5PR6
D531	2337751	GL-5PR6 (RED)
D532	2337601	1S2473
⌇	⌇	⌇
D539	2337601	1S2473
D701	2337811	GL-5NG6 (GREEN)
D702	2337811	GL-5NG6 (GREEN)
D703LR	2337601	1S2473
D704	2337751	GL-5PR6 (RED)
D705	2337751	GL-5PR6 (RED)
D801	2337461	S4VB20
D802	2337762	ERB12-01R
D805	2337189	HZ15-3
D806	2337519	HZ6C-3
D807	2337188	HZ24-2
D808	2337549	HZ7C-3
D809	2337189	HZ15-3
D810	2337601	1S2473
D811	2337601	1S2473
D812	2337122	HZ6B
D901	2337931	1K60R
D902	2337931	1K60R
D903	2337601	1S2473
D904	2397031	LED ARRAY
⌇	⌇	⌇
D909	2397031	LED ARRAY
VARIABLE RESISTORS		
R303	0150958	10KΩ-(B) (MPX VCO)
R702	0166713	100KΩ-(W) (BALANCE)
R704LR	0166851	100KΩ-(B) (VOLUME)
R725LR	0166852	50KΩ-(C) TREBLE
R732LR	0166852	50KΩ-(C) BASS

SYMBOL No.	PART No.	DESCRIPTION
COILS & TRANSFORMERS		
L301	2227354	Choke Coil(2.2μH)(for W.Germany)
L701LR	2227291	Audio trap Coil (0.67μH)
T151	2136503	MW RF Coil
T152	2136493	MW OSC Coil
T201	2154493	AM IF Trans
T202	2155174	FM Discri. Coil
T203	2155175	FM Discri. Coil
MISCELLANEOUS		
CT151	0283126	Trimmer Capacitor 11P
CP201	2134931	Anti-birdy filter (for W. Germany)
CP501	0241892	Capacitor array (330pF x 7)
	2425491	FM Tuner pack (except W. Germany)
	2425492	FM Tuner pack (for W. Germany)
	2678347	6P US Pin jack
	2688203	5P Screw terminal (except U.S.A. & Canada)
	2688204	5P Screw terminal (for U.S.A. & Canada)
	2688281	8P Push terminal
	4573552	3φ x 16 bind tapping screw
	4567411	3φ x 6 DT bind screw
	4784106	3φ x 10 bind tapping screw
J701	2677751	Head phone jack (GRAY)
J701	2677752	Head phone jack (BLACK)
RP501	0189014	Resistor array (100KΩ x 7)
RP502	0189031	Resistor array (39KΩ x 4)
RP503	0189021	Resistor array (100KΩ x 5)
B501	2810122	Lithium battery
MF201	2134992	FM ceramic filter MA8 (for U.S.A. & Canada)
MF201	2135002	FM Ceramic filter MS2 (except U.S.A. & Canada)
MF202	2134992	FM Ceramic filter MA8 (for U.S.A. & Canada)
MF202	2135002	FM Ceramic filter MS2 (except U.S.A. & Canada)
MF203	2155152	AM Ceramic filter 450F3
MF204	2135002	FM Ceramic filter MS2 (for W. Germany)
⚠S001	2639869	Power Switch
S501	2639682	Tact switch
⌇	⌇	⌇
S510	2639682	Tact switch
S511	2638241	Tact switch
S512	2639682	Tact switch
⌇	⌇	⌇
S518	2639682	Tact switch
S519	2638241	Tact switch
S520	2639930	1 Key push switch (AUTO-MONO)
S521	2628301	Slide switch (for W. Germnay, Asia & Latin America countries, etc.)
S701	2639939	2 Key push switch (LOUDNESS, SUBSONIC)
S702	2639939	2 Key push switch (LOUDNESS, SUBSONIC)
S703	2600121	2 Key push switch (SP SELECT)
S704	2600121	2 Key push switch (SP SELECT)
X501	2789281	Crystal oscillator (4.5 MHz)
⚠F001	2727564	Fuse –2.5A 125V (for U.S.A. & Canada)
⚠F001	2727191	Fuse –T-1A 250V (for France, W. Germnay & U.K.)
⚠F701LR	2727223	Fuse –3A 250V (for U.S.A. & Canada)
⚠F701LR	2727335	Fuse –F 2.5A 250V (except U.S.A. & Canada)
	2788613	Fluorescent display tube
	3965874	LED holder (LOUDNESS)
	3965875	LED holder (SUBSONIC)
	3965876	LED holder (TAPE 1, TAPE 2, COPY)
	3965877	LED holder (SPEAKERS)
for FINAL ASSEMBLY		
	4456983	Cover
	4567463	4φ x 10 DT bind screw

SYMBOL No.	PART No.	DESCRIPTION
for DIAL MECHANISM ASSEMBLY		
	4025861	Front panel ass'y
	3965113	Blind
	3903731	Power display sheet
	3903762	Flourescent display sheet
	3300731	Preset key PRESET
	3306613	Push button (M) (MEMORY)
	3300921	Button (UD) ass'y (TUNING)
	3300703	Push button (PS) (SCAN)
	3300632	Slide knob
	4784106	3φ x 10 bind tapping screw
	3300591	Power button ass'y (POWER)
	3297621	Push button (SPEAKER A, B)
	3300641	Knob (VR) (VOLUME)
	3300621	Knob (VR)
	3300572	Push button (S) (SUBSONIC, LOUDNESS)
	3300581	Push button (L) (FM MODE)
	3927411	Leg
	4567413	3φ x 10 DT bind screw (for Leg)
	4567454	3φx12DT bind screw (for TA P.W.B.)
	4784106	3φ x 10 bind tapping screw (for Antenna terminal etc.)
	4567432	3φx8DT bind screw (for Rear plate)
	4567432	3φ x 8 DT bind screw (for AC selecter) (for W. Germnay, Asia & Latin American countries, etc.)
	4567422	4φ x 8 DT bind screw (for Trans.)
	4567412	3φ x 8 DT bind screw (for Front panel)
	4784106	3φ x 10 bind tapping screw (for PWB, Front panel)
	4567451	3φ x 6 DT bind screw
⚠T001	2248641	Power transformer AC 120V (for U.S.A. & Canada)
⚠T001	2248642	Power transformer AC 220V (for Switzerland, Sweden, W. Germany, France)
⚠T001	2248643	Power transformer AC 240V (for Australia & U.K.)
⚠T001	2248644	Power transformer double (for W. Germnay, Asia & Latin American countries, etc.)
⚠	2618053	Voltage selector switch (for W. Germany, Asia & Latin American countries, etc.)
for REAR PLATE ASSEMBLY		
	4460411	Rear plate (for U.S.A.)
	4457757	Rear plate (for Canada)
	4457750	Rear plate (for Australia & U.K.)
	4457758	Rear plate (for W. Germany, Switzerland, Sweden, France)
	4457759	Rear plate (for W. Germany, Asia & Latin American countries, etc.)
⚠	0043793	Bushing (3P-4) (for U.S.A.)
⚠	3913006	Bushing (4N-4) (except U.S.A.)
	3944381	AC outlet cap (for W. Germany)
⚠	2702331	Power supply cord (for U.S.A.)
⚠	2700122	Power supply cord (for Canada)
⚠	2748752	Power supply cord (except U.S.A., Canada, Australia, U.K.)
⚠	2749622	Power supply cord (for Australia)
⚠	2749202	Power supply cord (for U.K.)
	2677911	FM antenna socket (except U.S.A. & Canada)
⚠	2657721	AC outlet (for U.S.A., W. Germany, Asia & Latin American countries, etc.)
⚠	2658372	AC outlet (for Canada)
⚠	2727191	Fuse T1A-250V (for W. Germany, Asia & Latin American countries, etc.)
for ACCESSORIES		
⚠	2727193	Fuse T2A-250V (for W. Germany, Asia & Latin American countries, etc.)
⚠	2658361	E socket adaptor (for W. Germany, Asia & Latin American countries, etc.)
	2757522	FM antenna (except W. Germany)